

FIGURE 1

Double Stranded or Single Stranded DNA or RNA

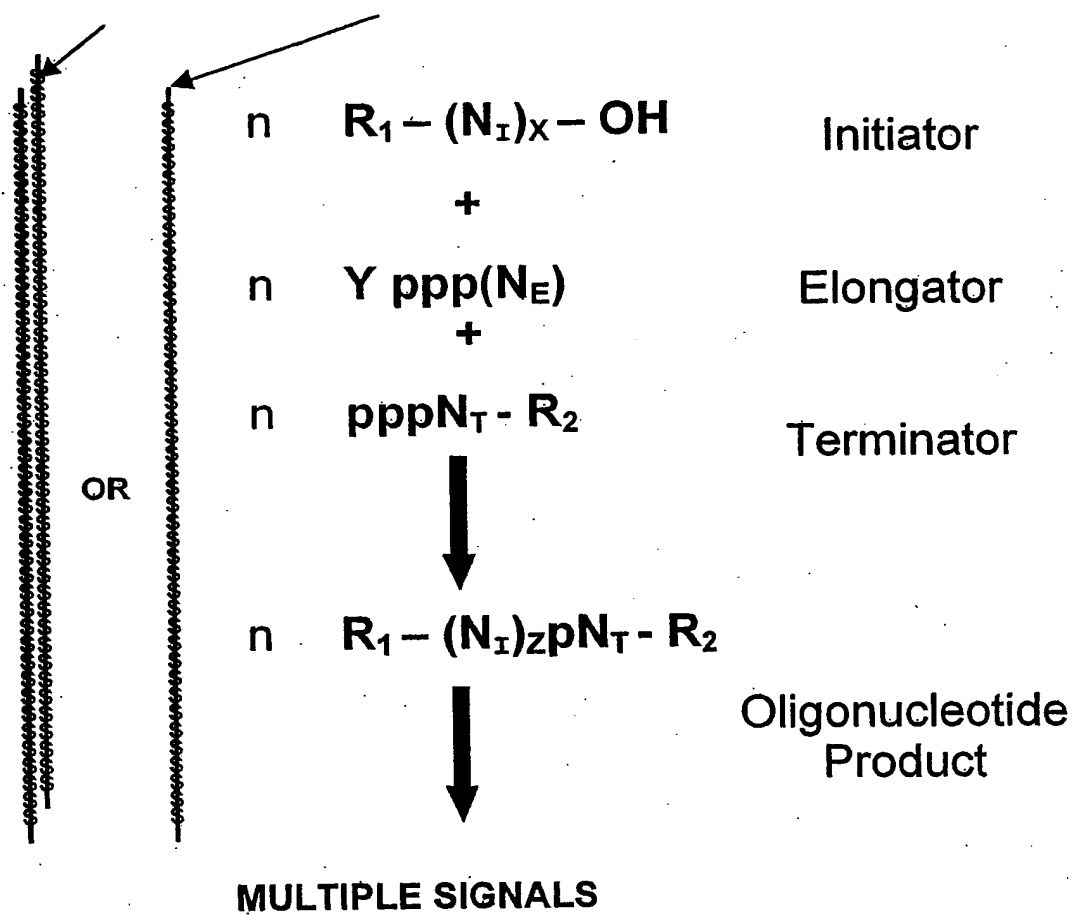


FIGURE 2

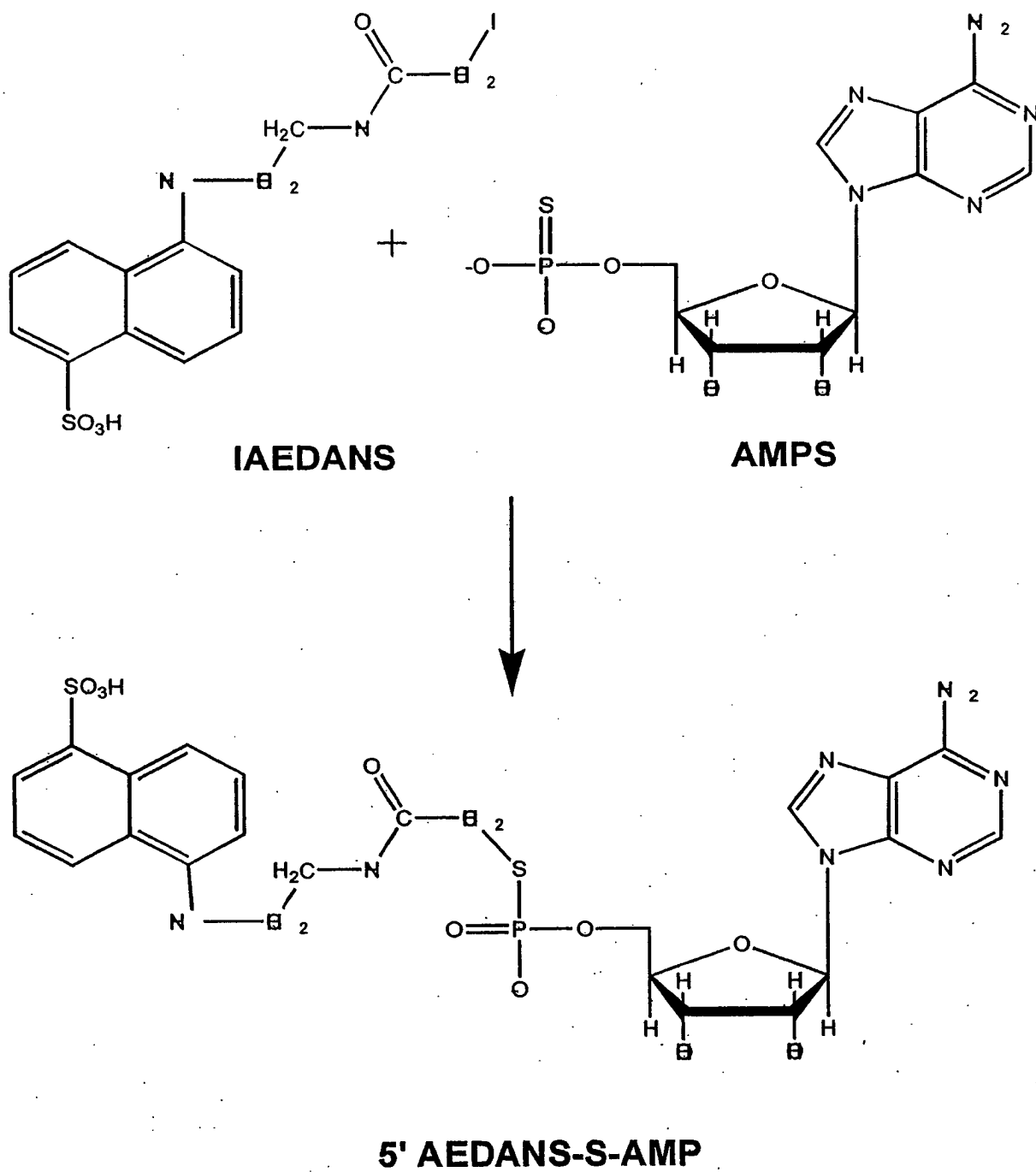
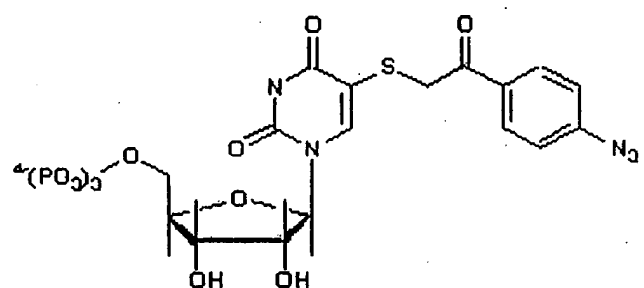
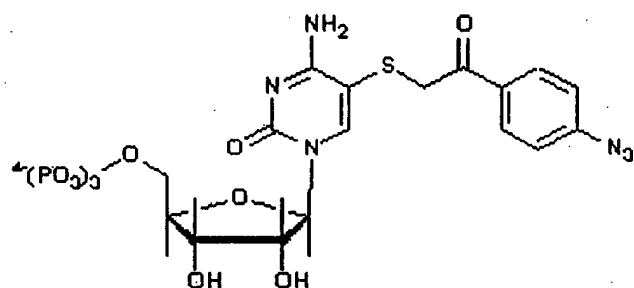


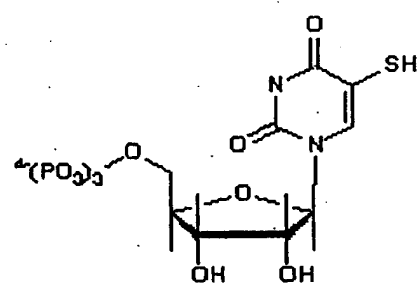
FIGURE 3



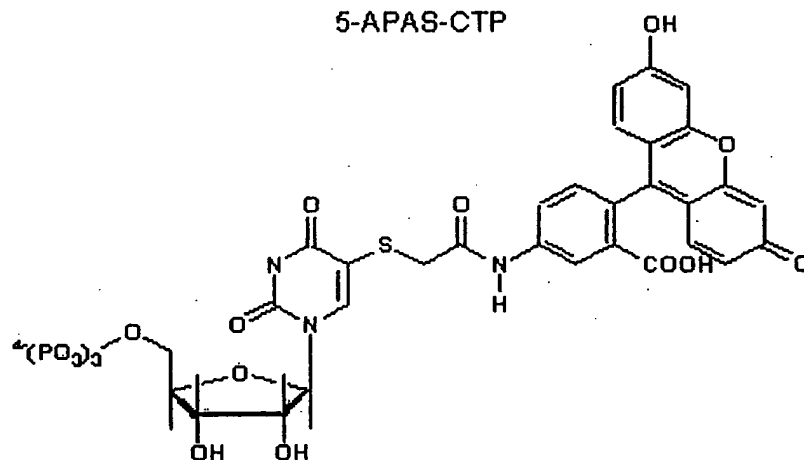
5-APAS-UTP



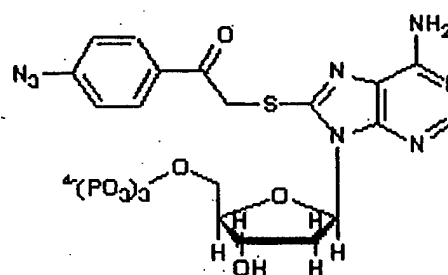
5-APAS-CTP



5-SH-UTP

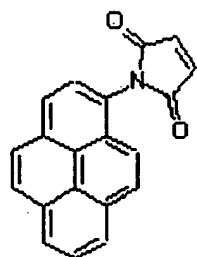


5-SF-UTP

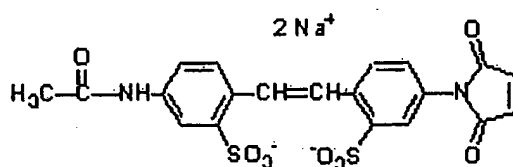


8-APAS-ATP

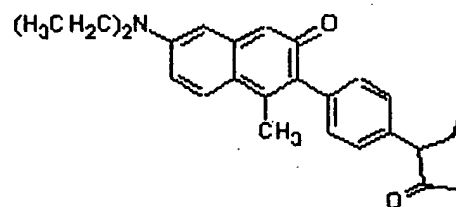
FIGURE 4



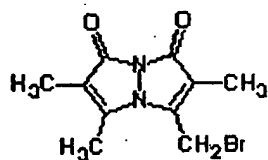
pyrene



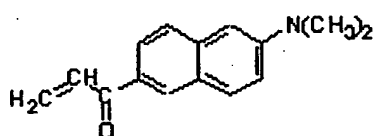
stilbene



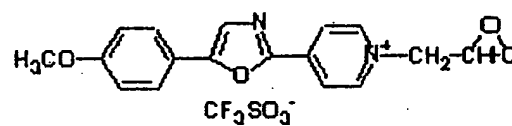
coumarin



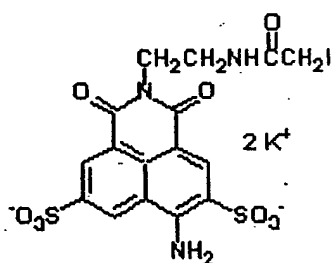
bimeane



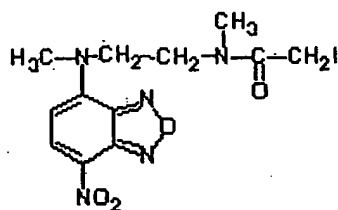
naphthalene



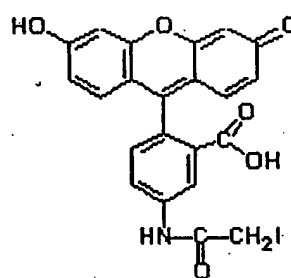
pyridyloxazole



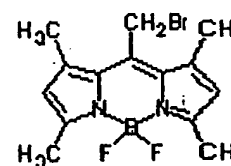
naphthalimide



NBD



fluorescein



BODIPYTM

FIGURE 5

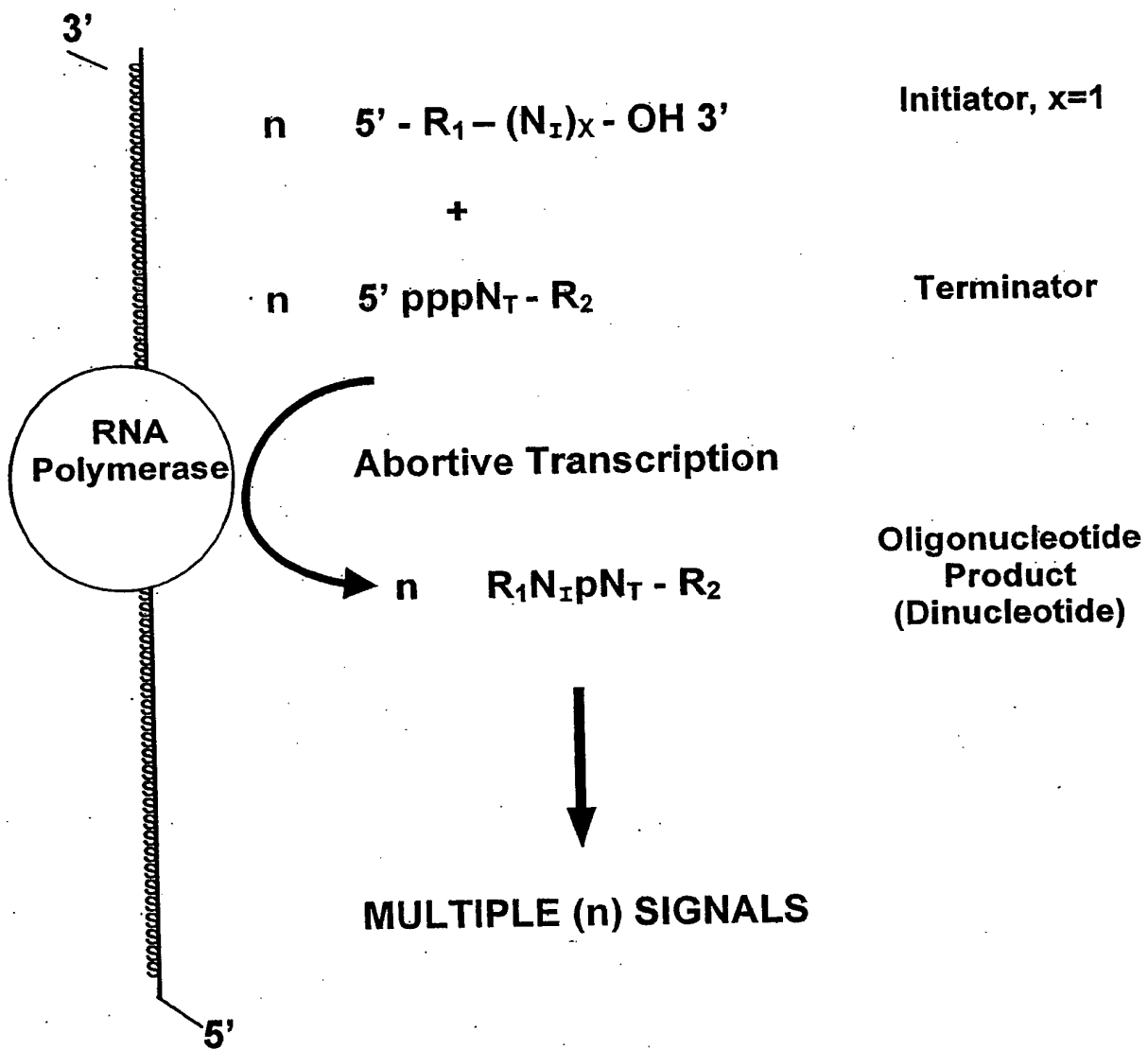


FIGURE 6

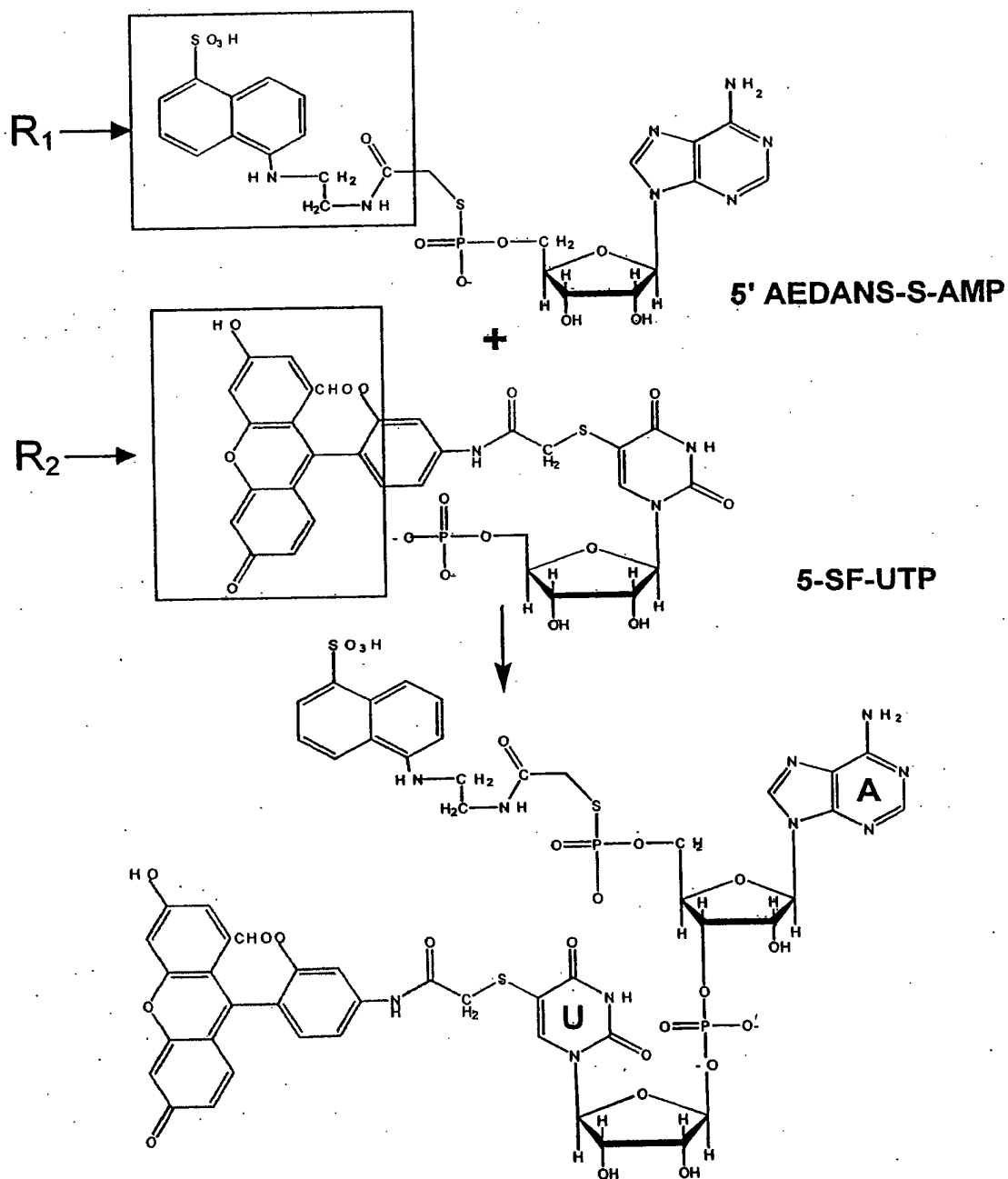


FIGURE 7

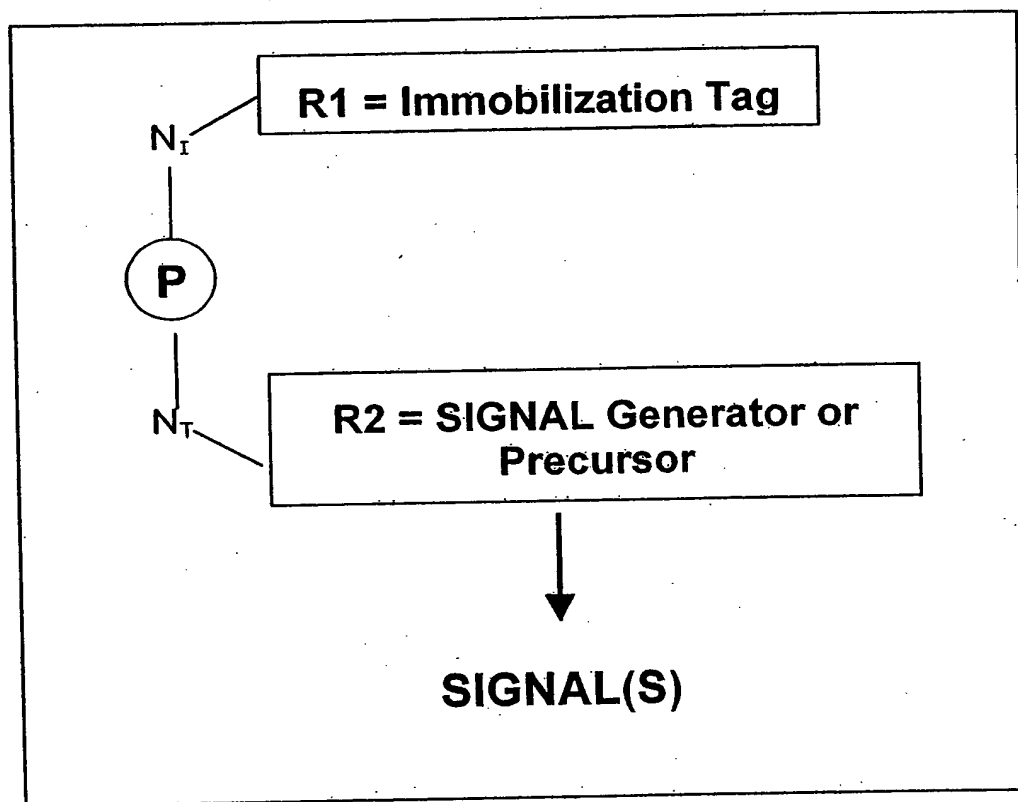


FIGURE 8

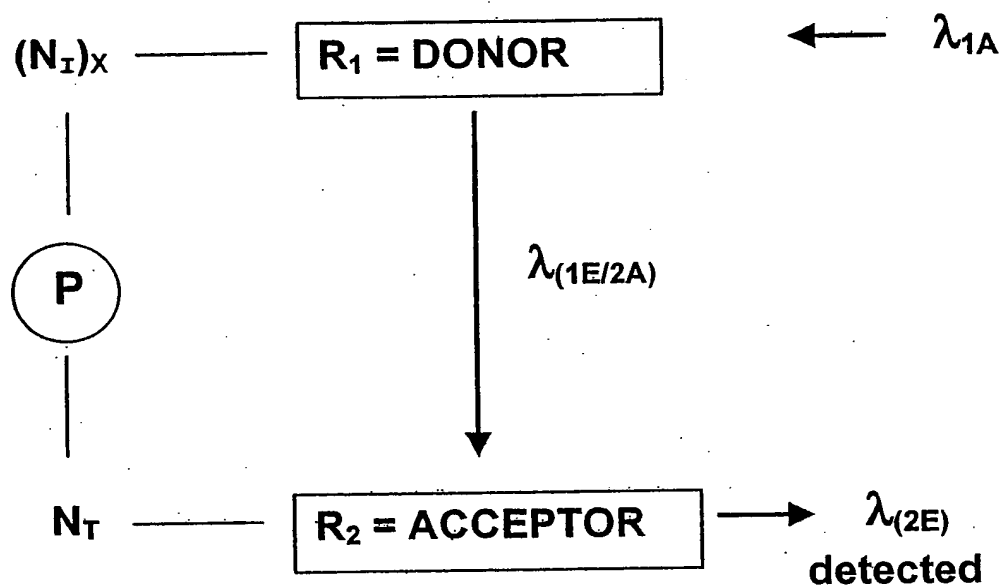


FIGURE 9

n $R_1N_1pN_2R_2-OH$

+

n $pppN_3R_3$



n $R_1N_1pN_2R_2pN_3R_3$

where N_3 is a terminator

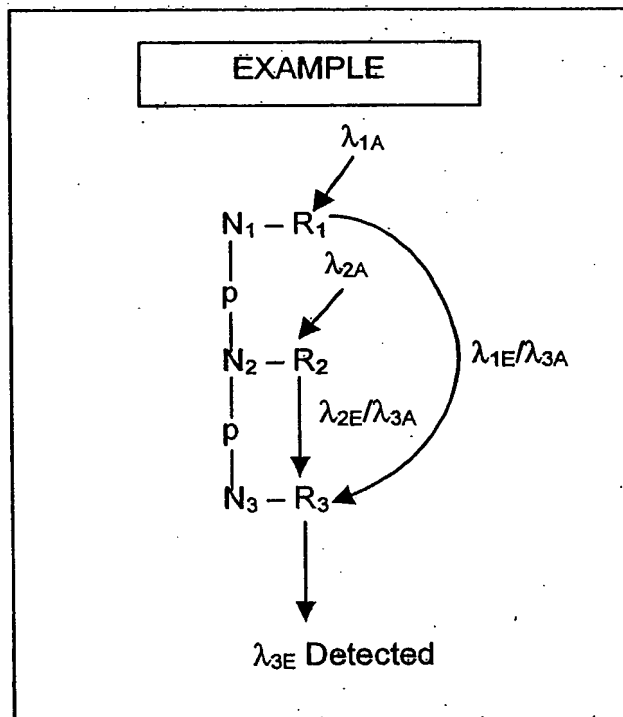


FIGURE 10

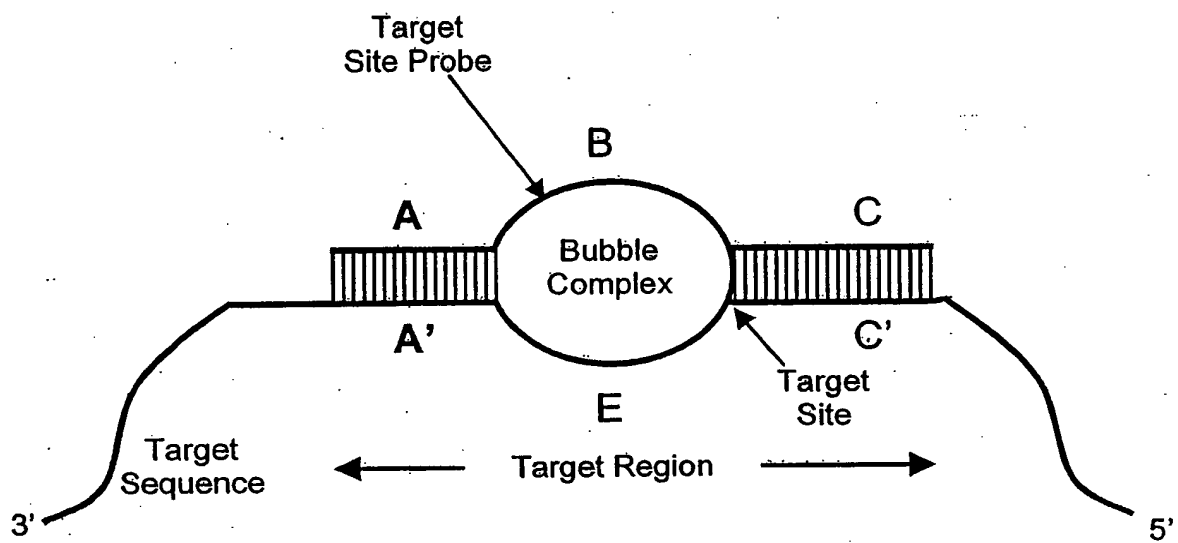


FIGURE 11

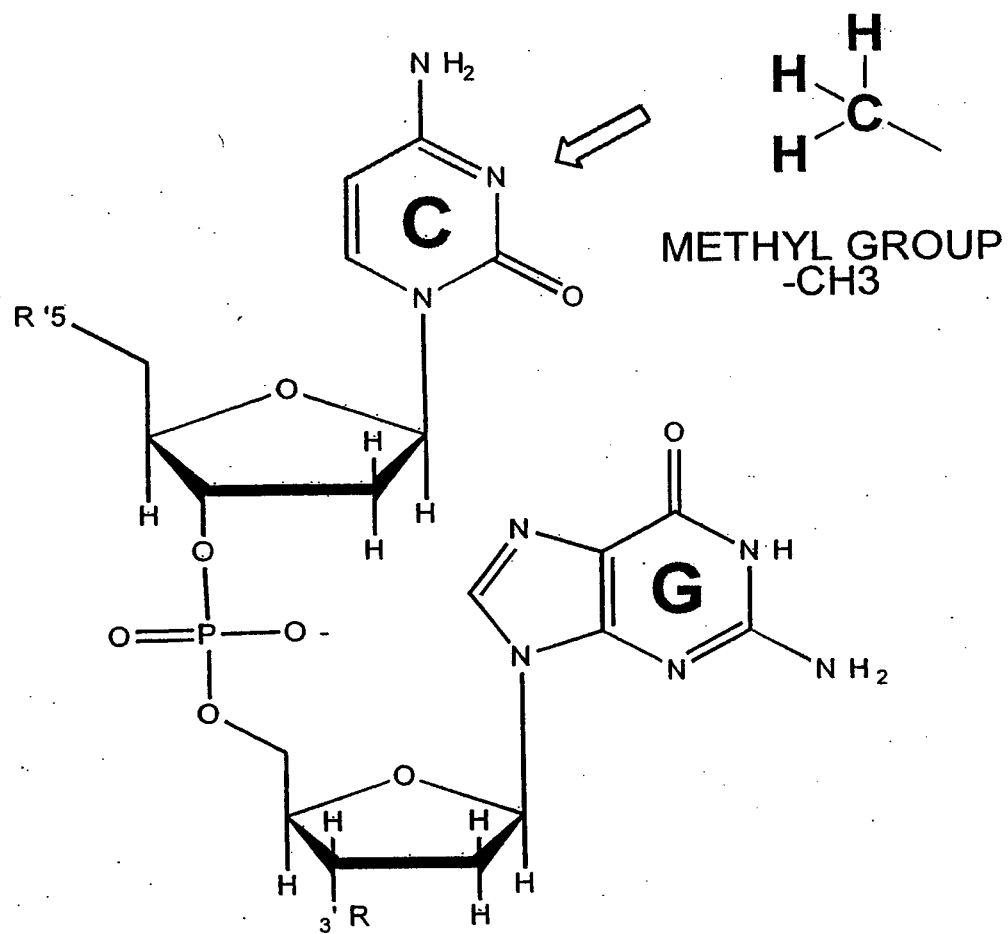


FIGURE 12

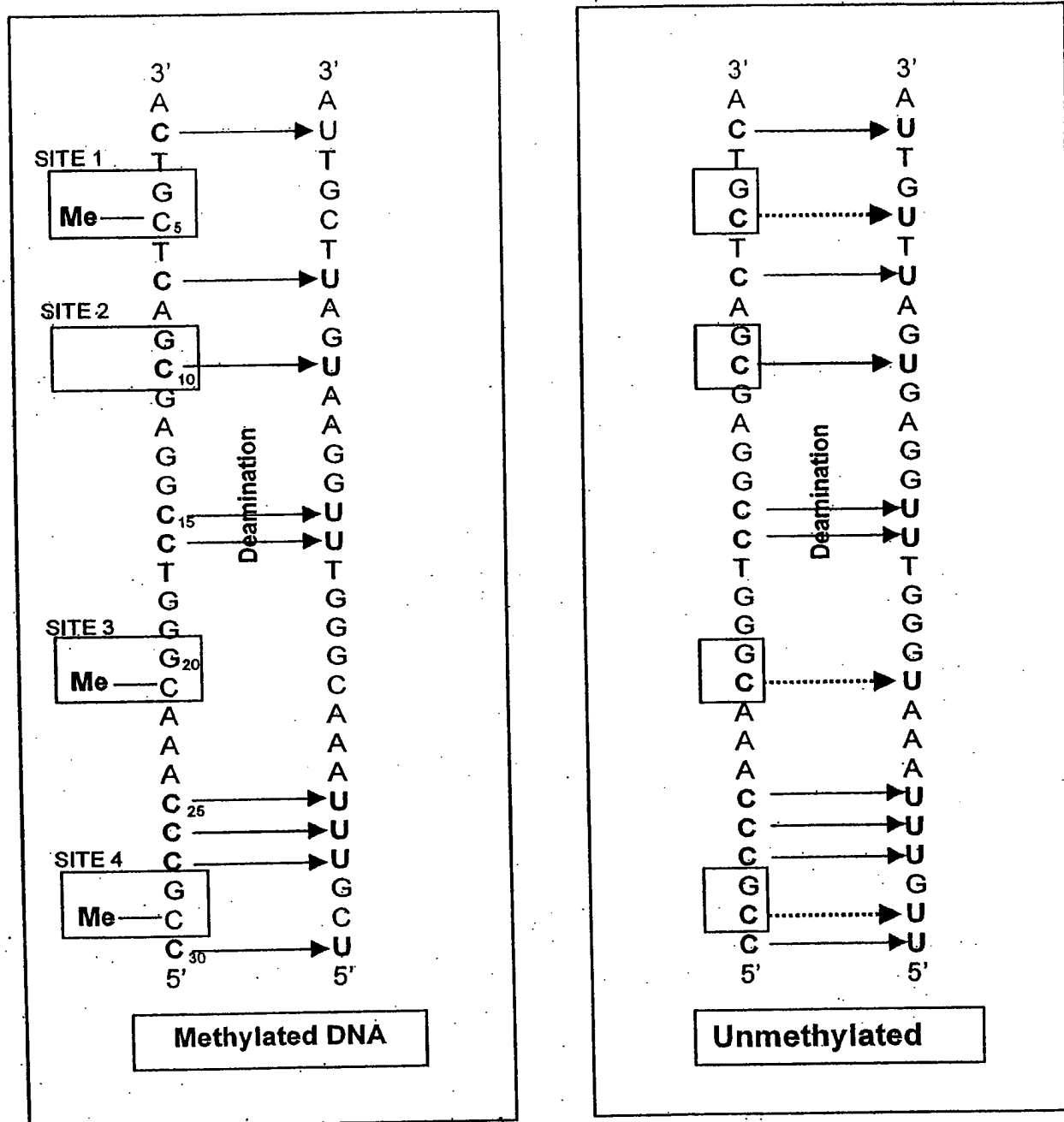


FIGURE 13

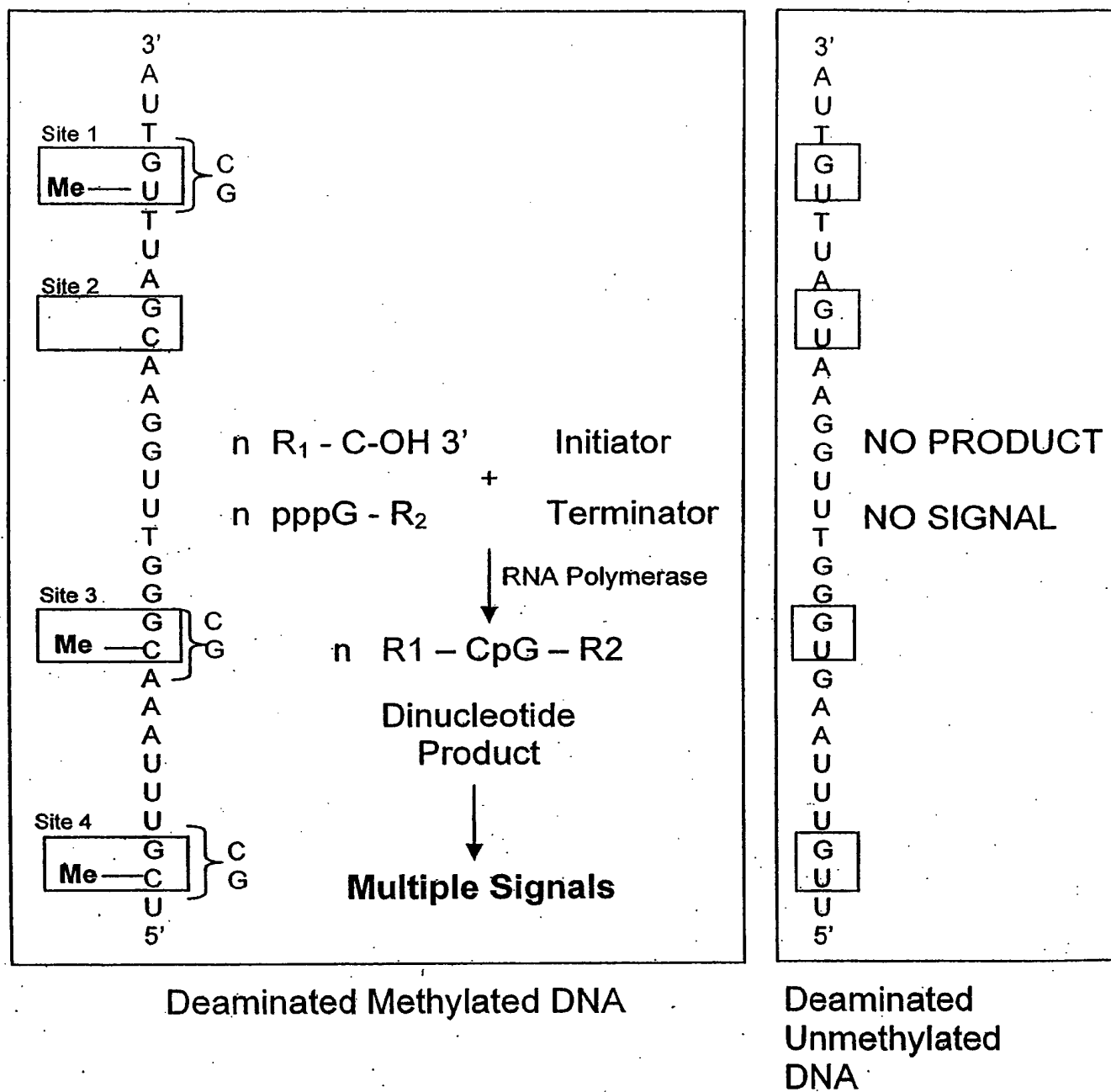
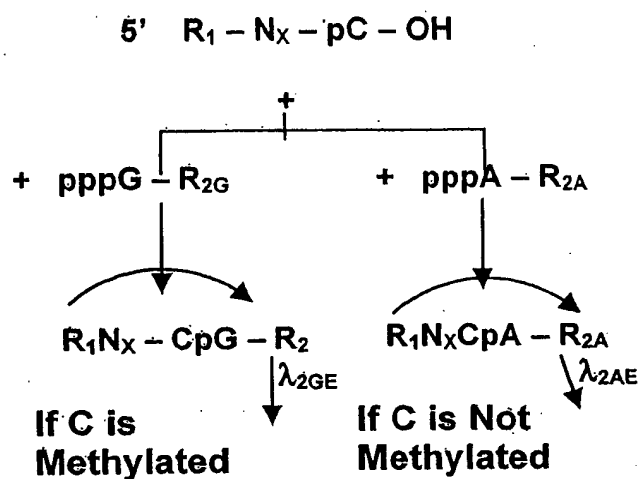
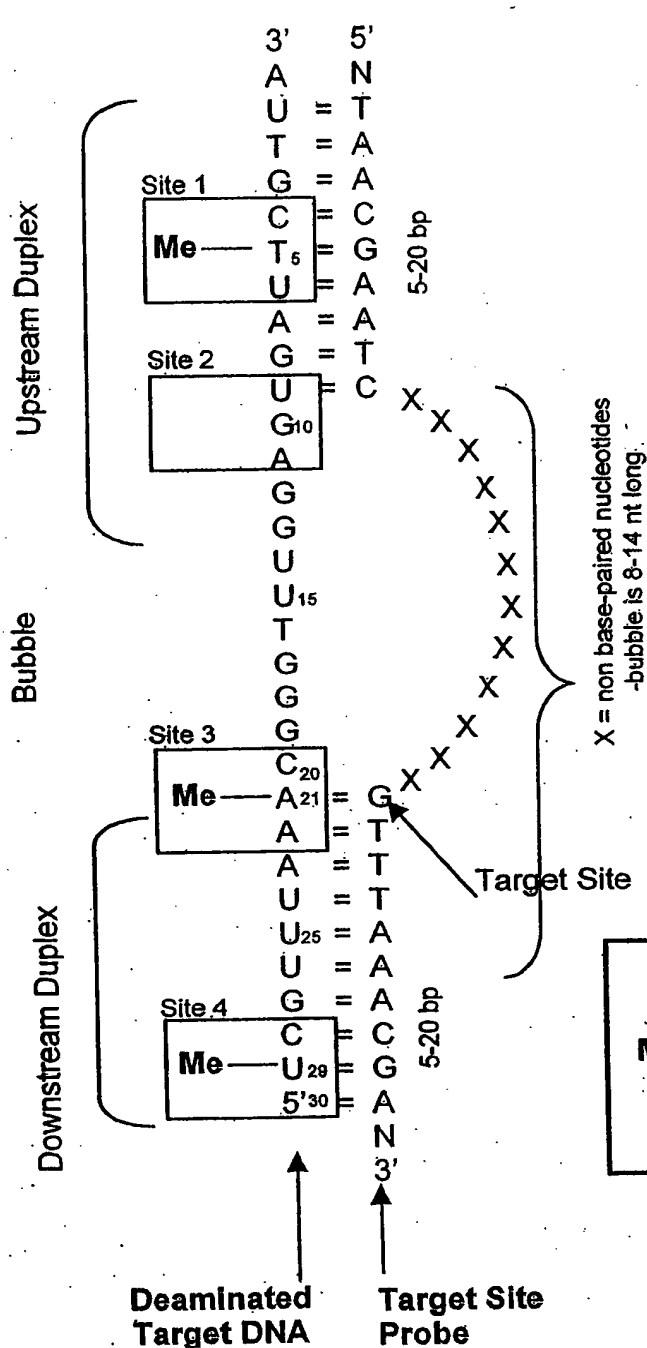


FIGURE 14



- M = 1 If both copies are 100% methylated: Only λ_{2GE} detected
- M = 0.5 If 1 copy is methylated: Both λ_{2GE} and λ_{2AE} detected
- M = 0 If both copies unmethylated: only λ_{2AE} detected

$$M = \text{Methylation Index} = \frac{E\lambda_{2GE}}{E\lambda_{2GE} + E\lambda_{2GA}}$$

FIGURE 15

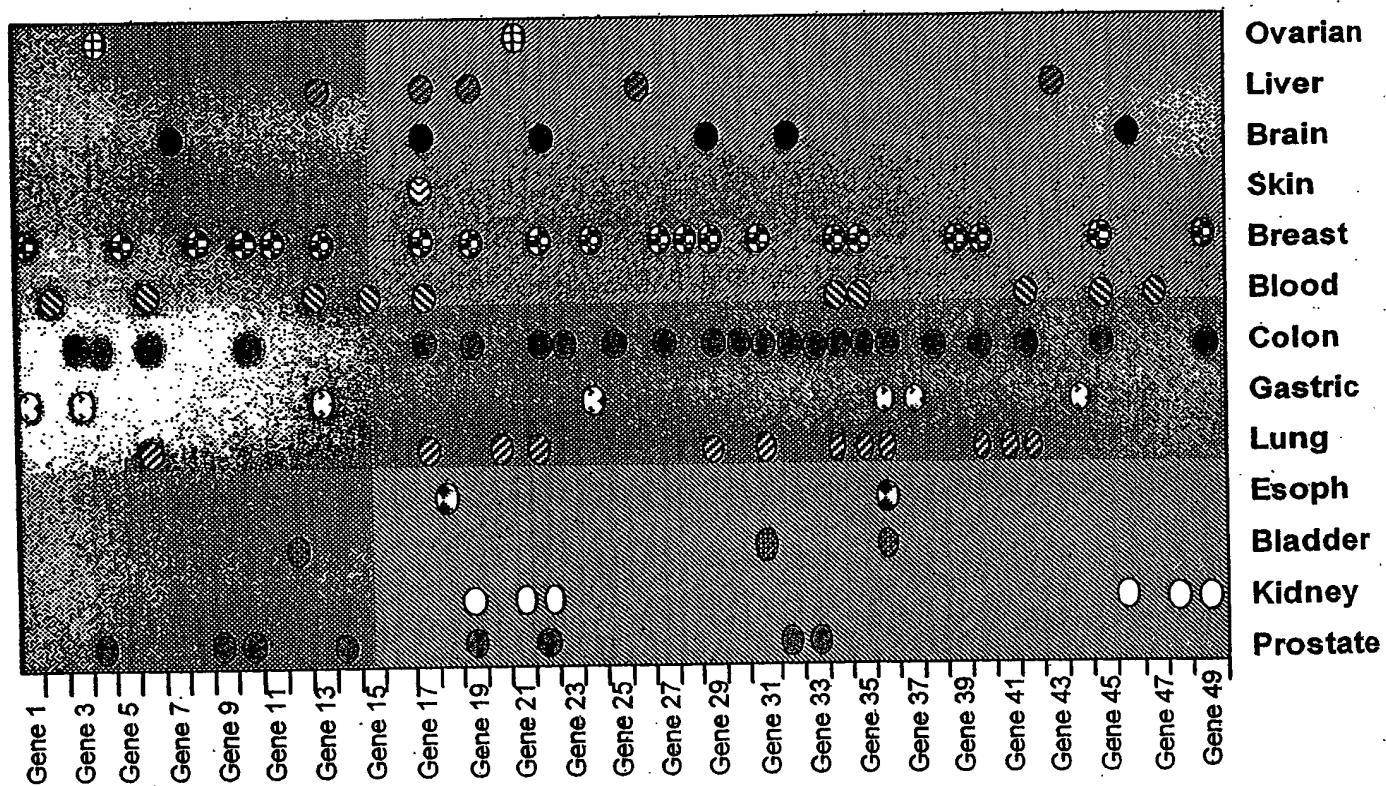


FIGURE 16

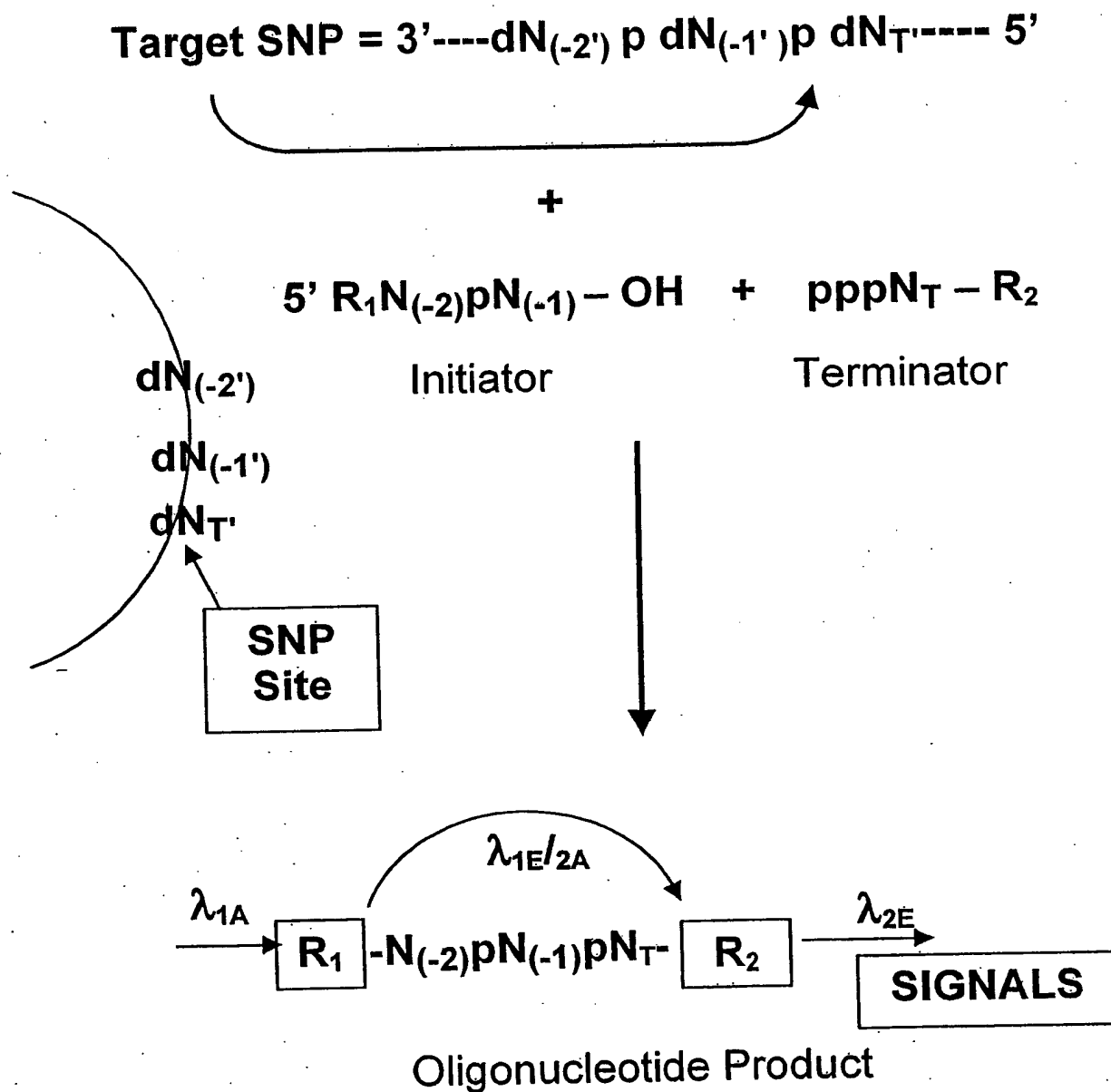


FIGURE 17

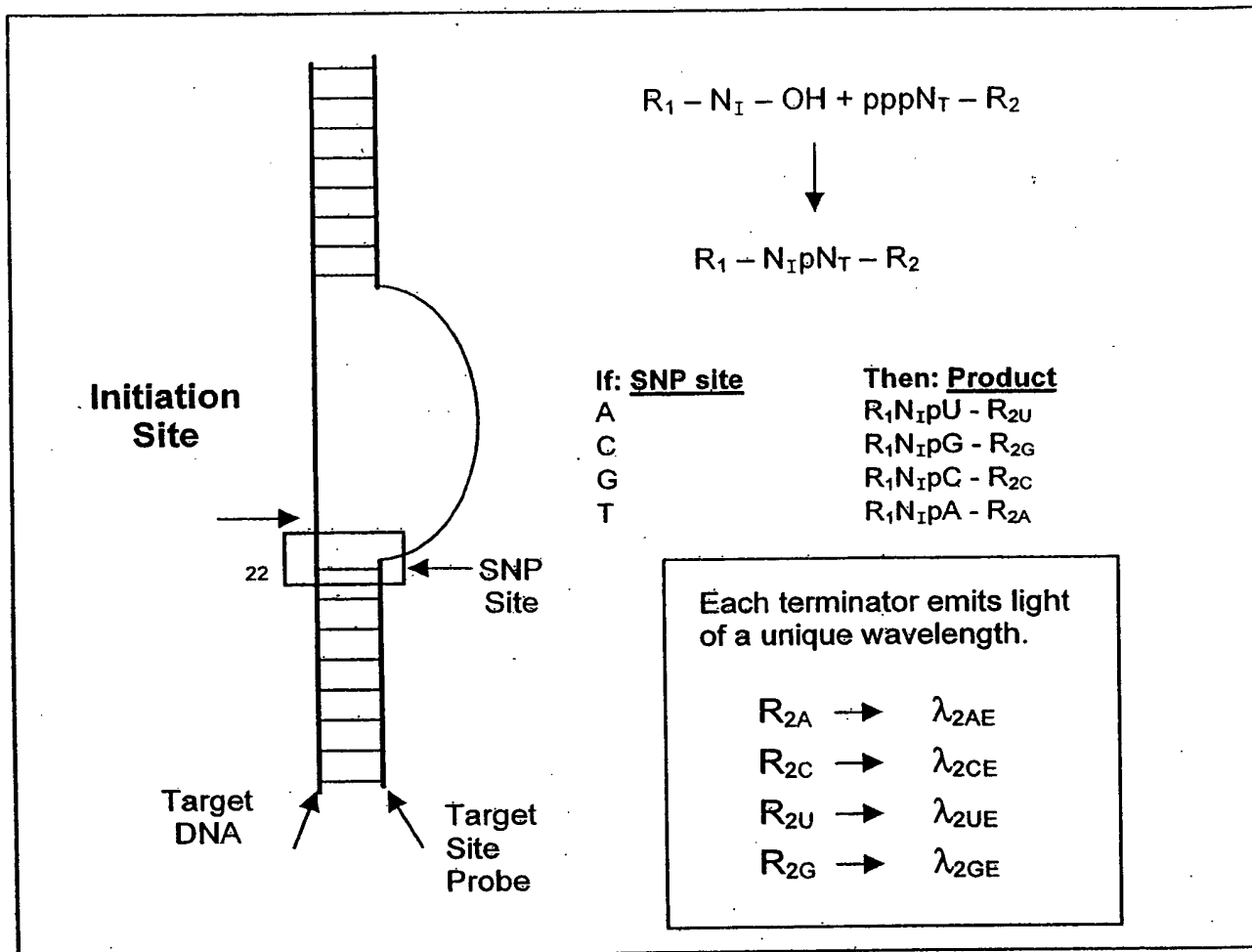


FIGURE 18

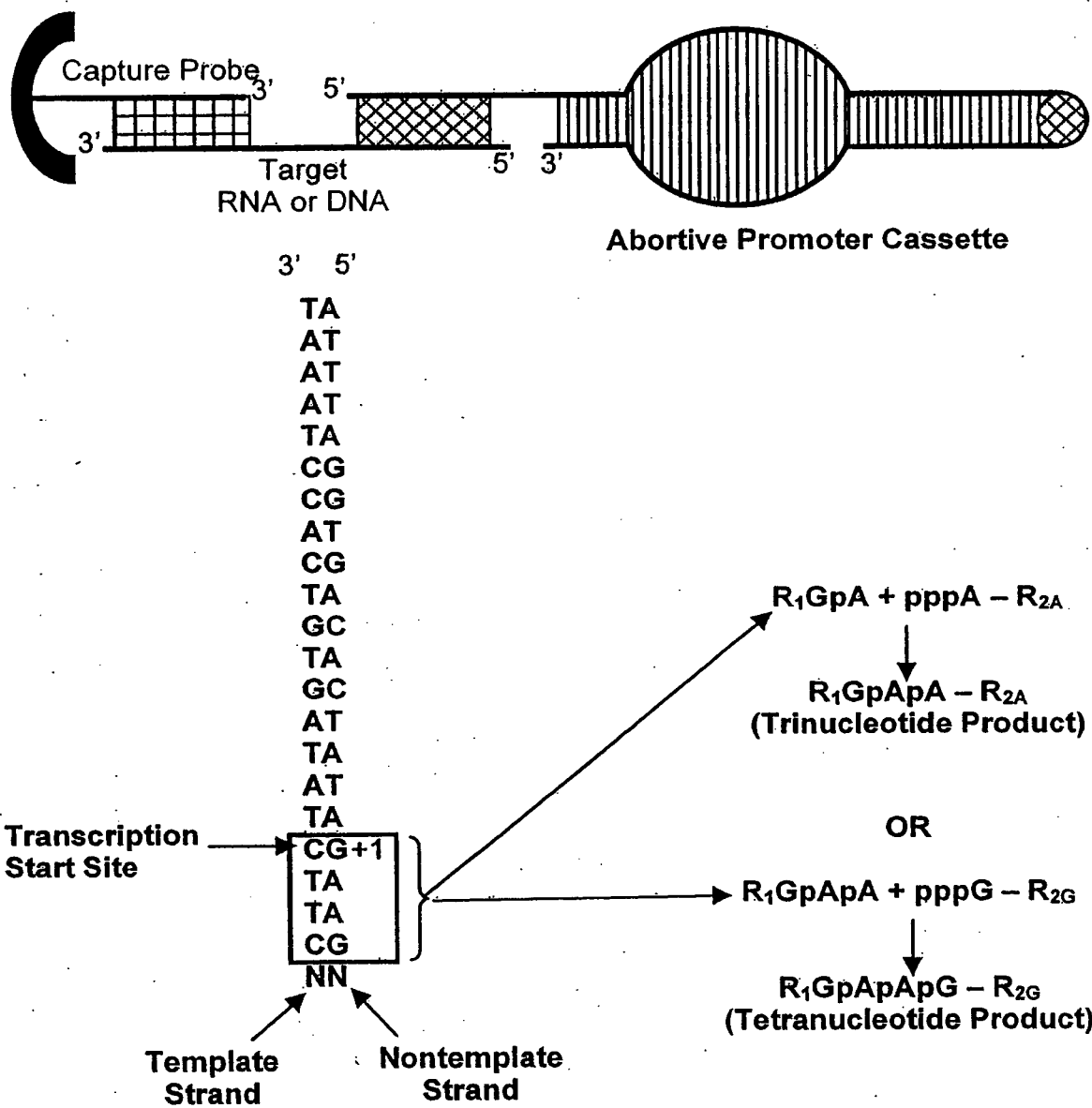


FIGURE 19

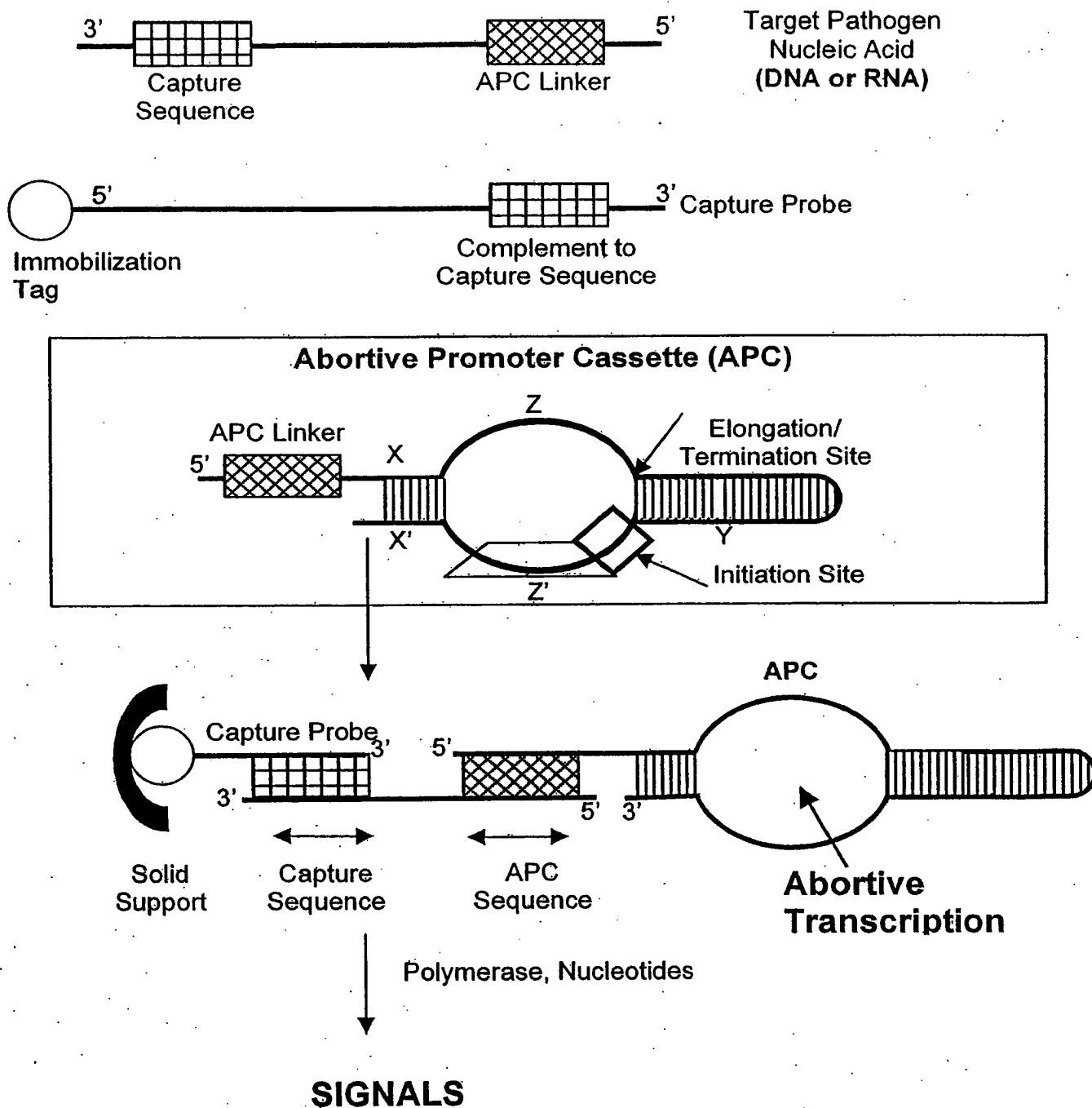


FIGURE 20

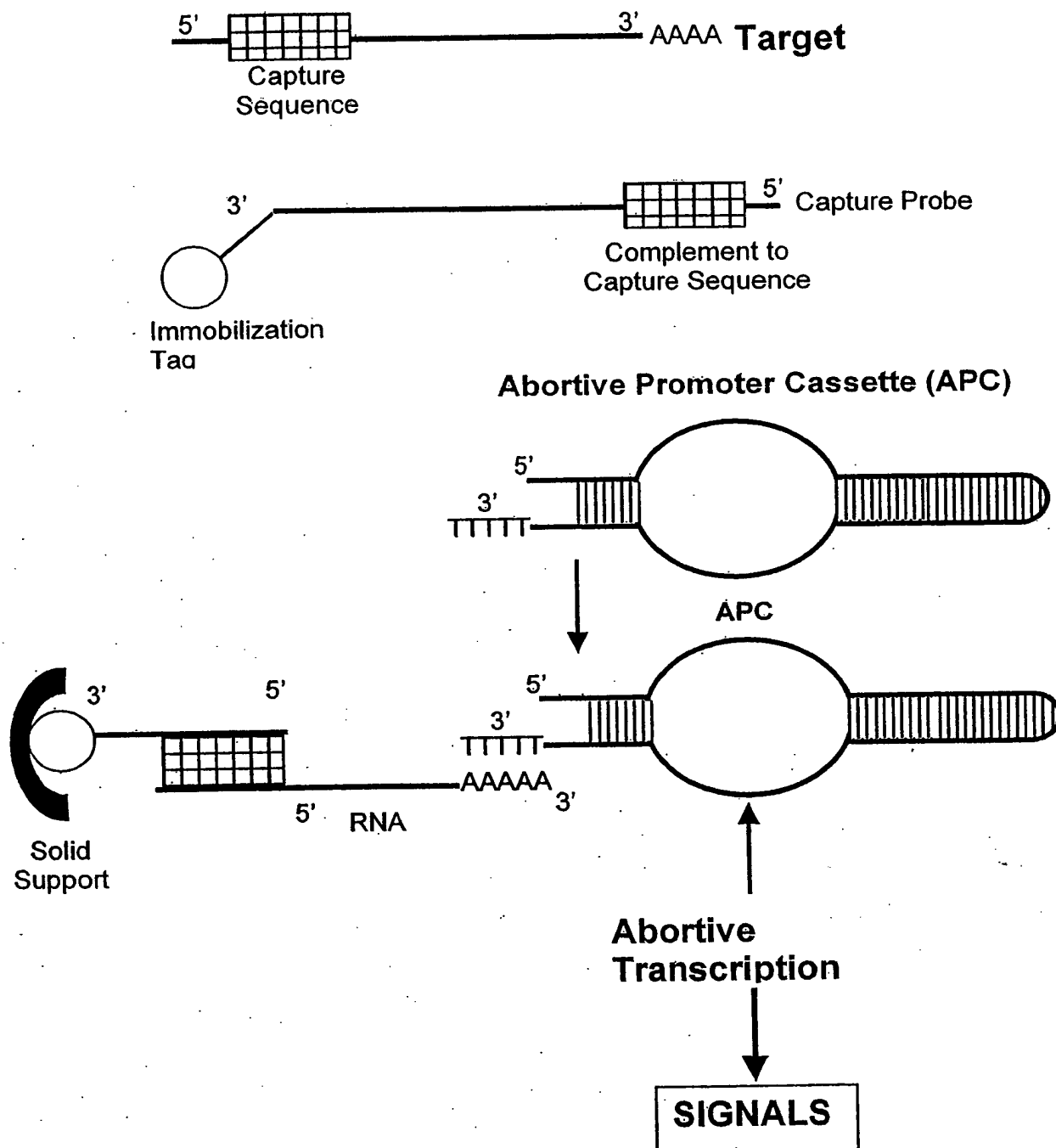


FIGURE 21

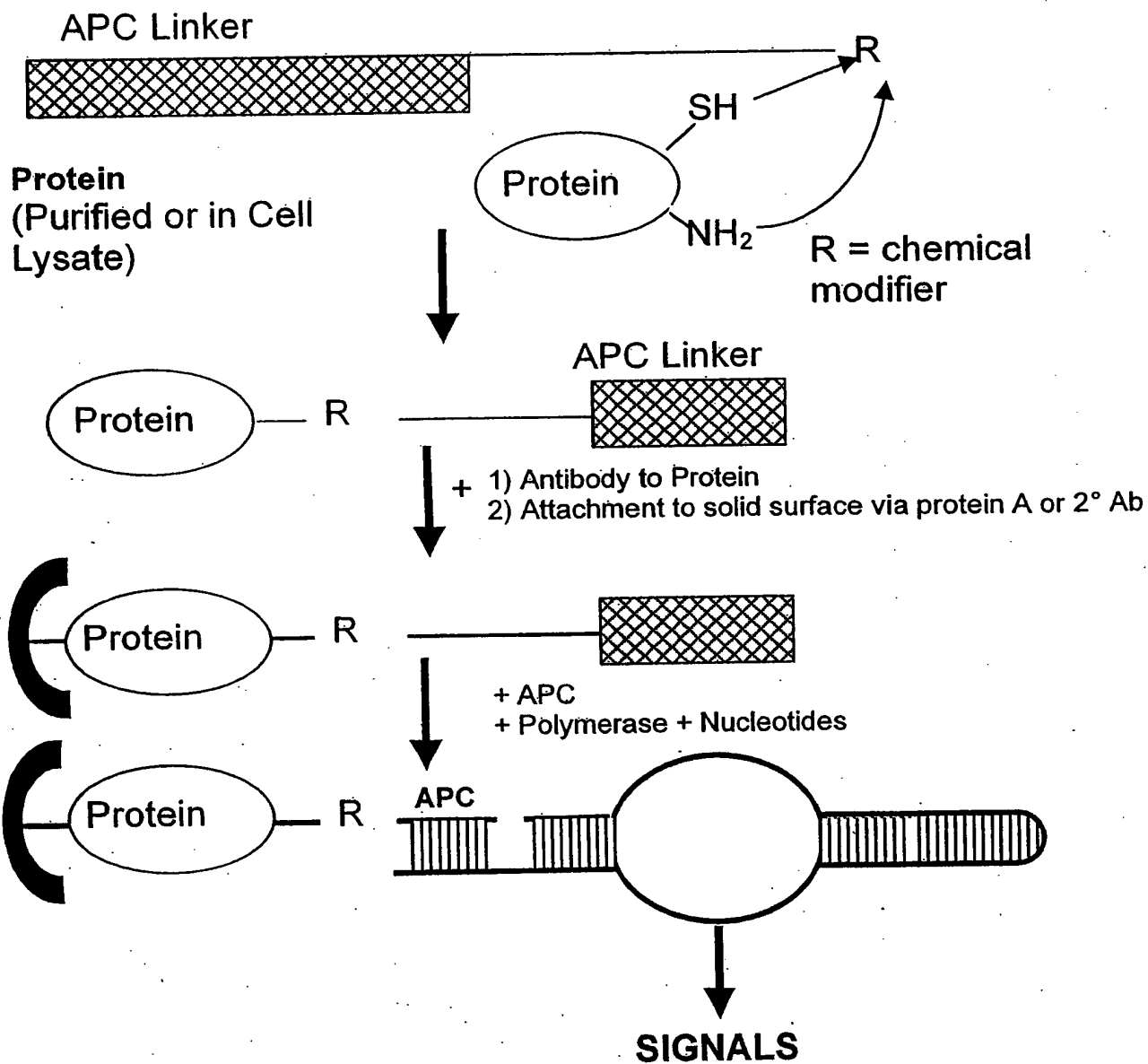


FIGURE 22

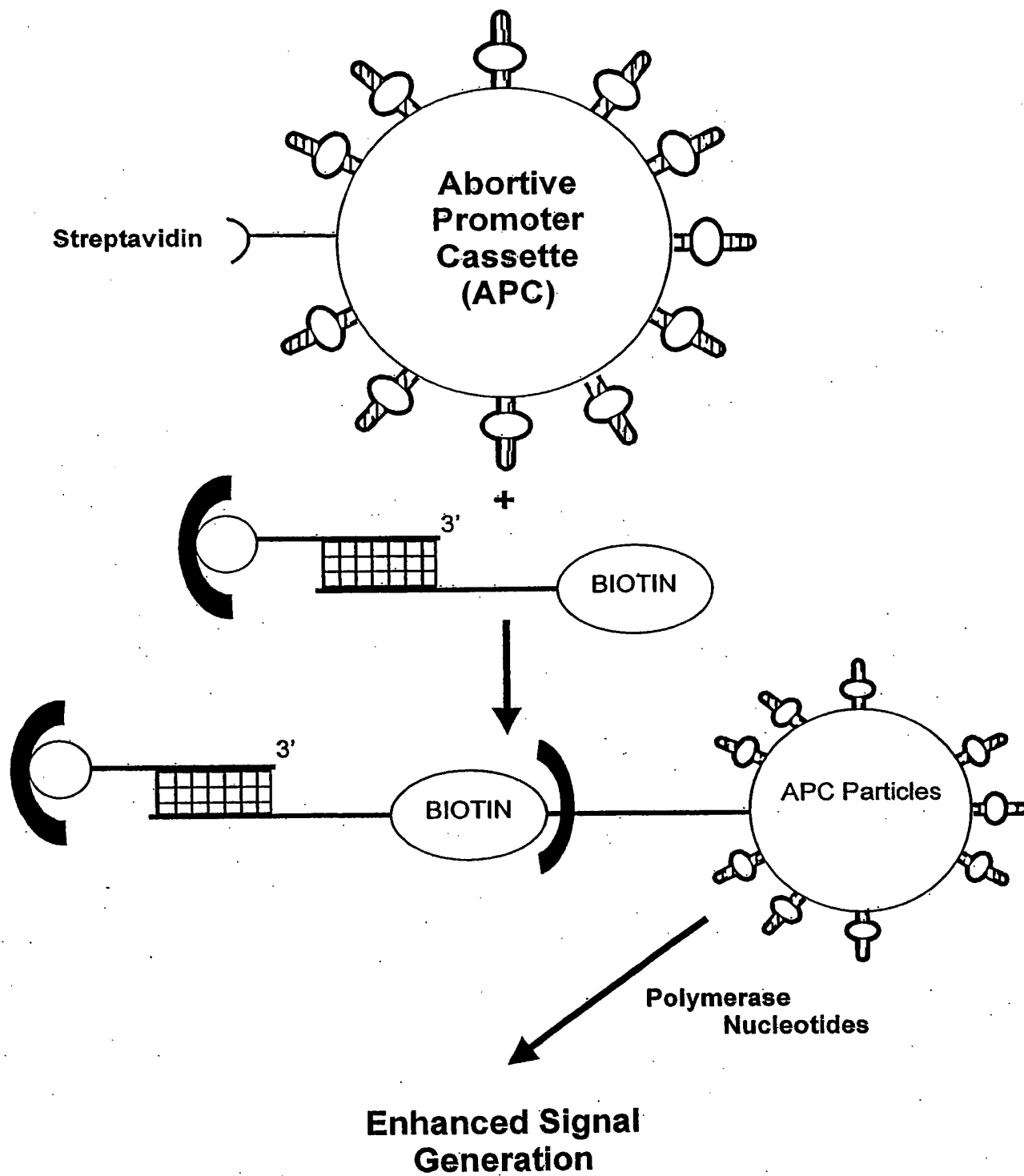


FIGURE 23

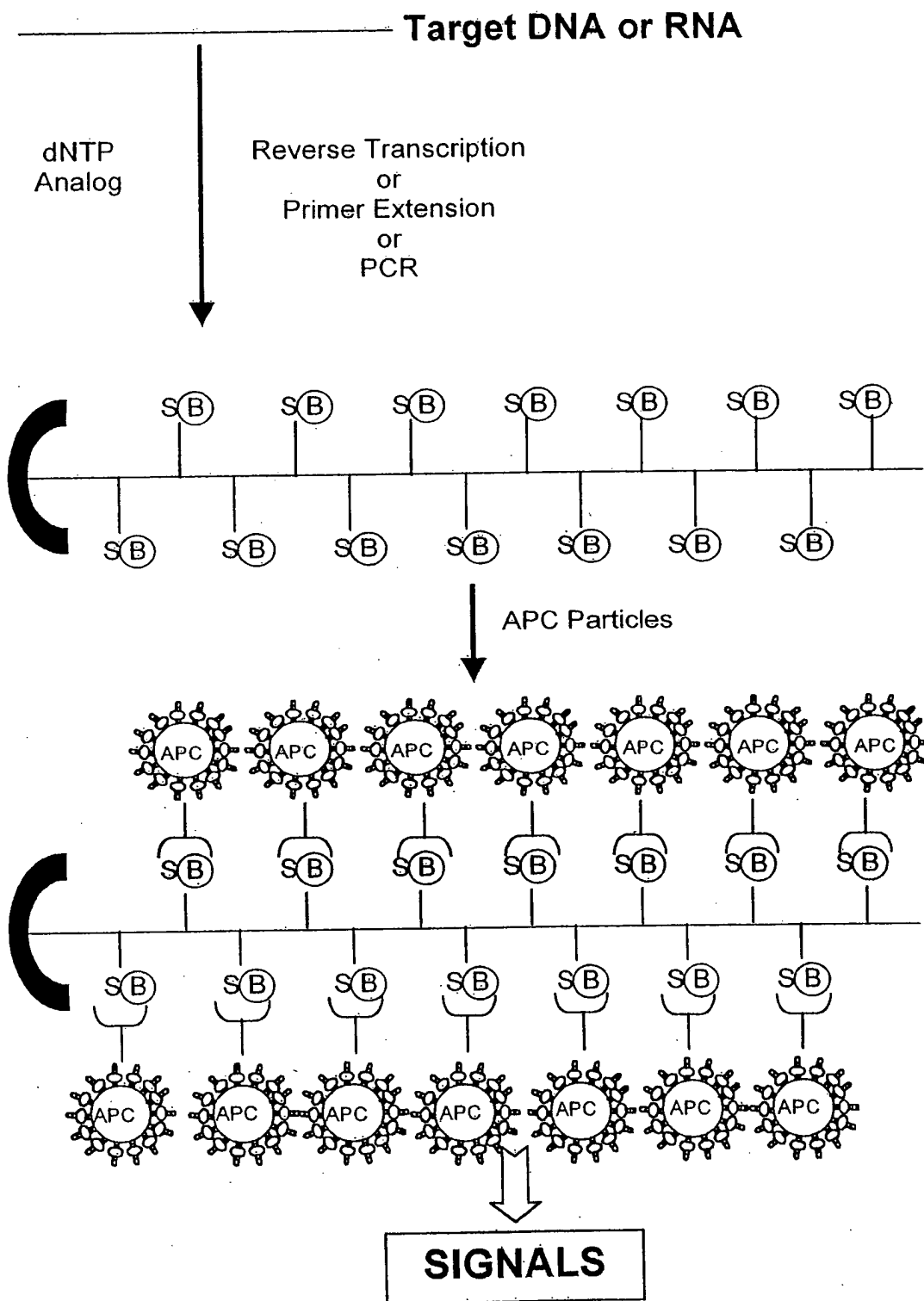


FIGURE 24

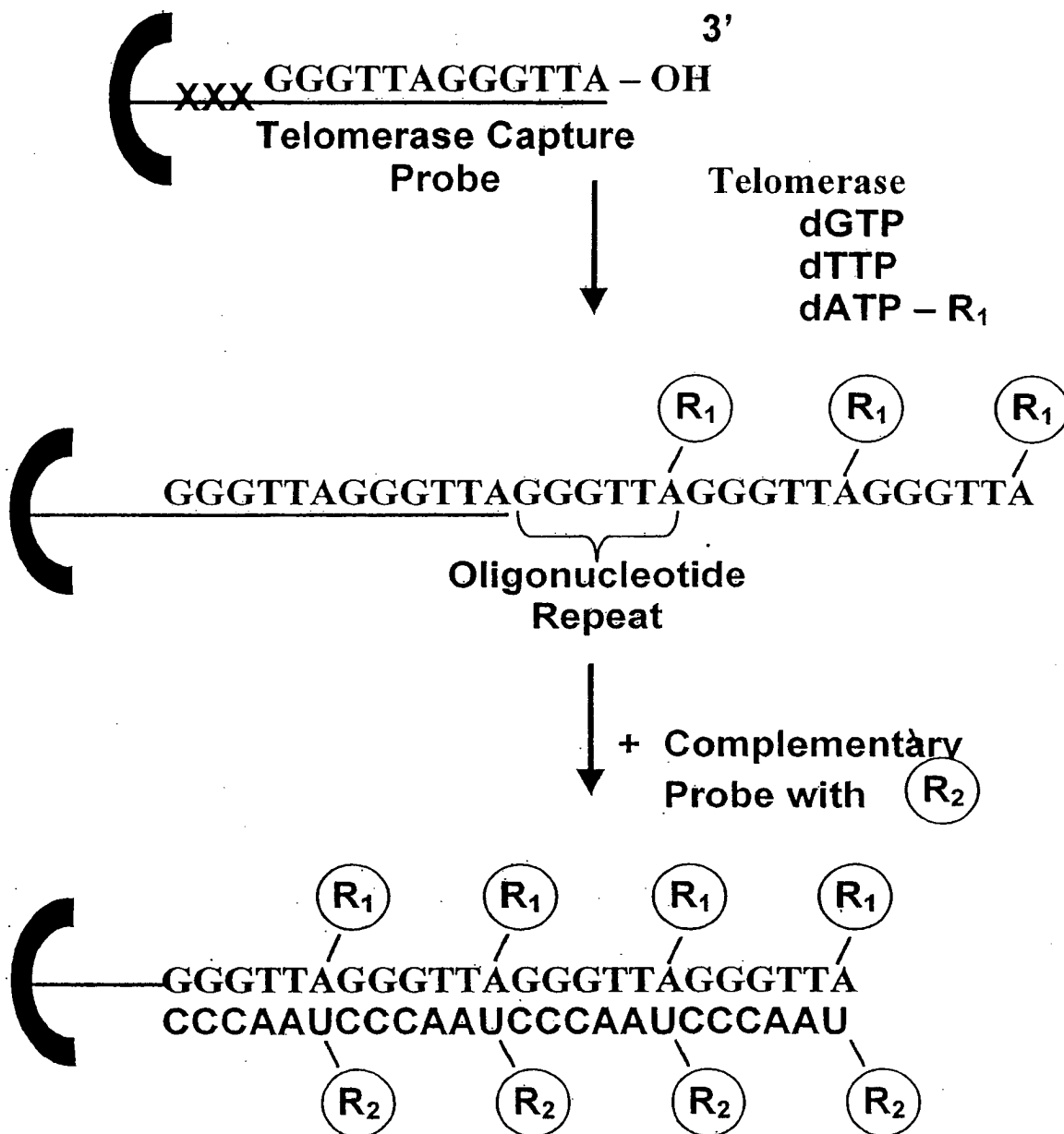


FIGURE 25

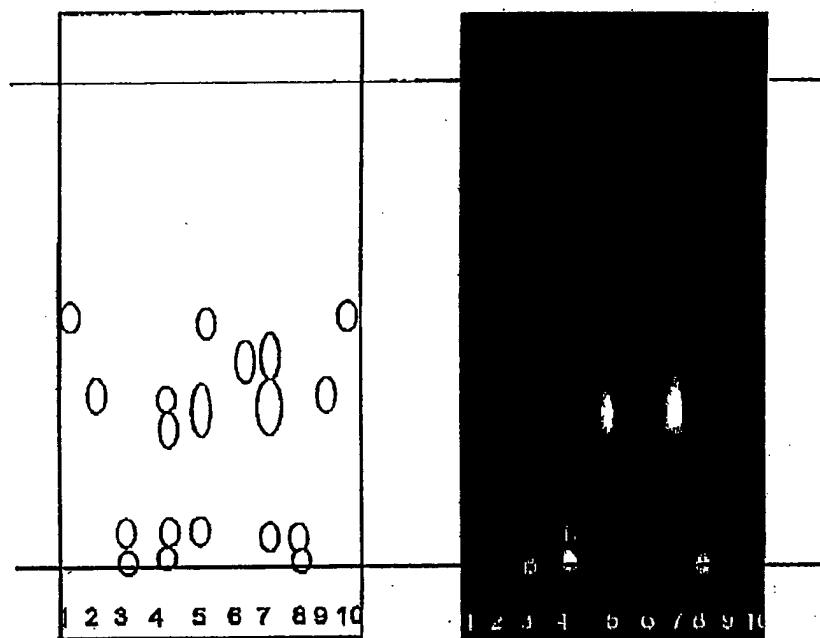


FIGURE 26

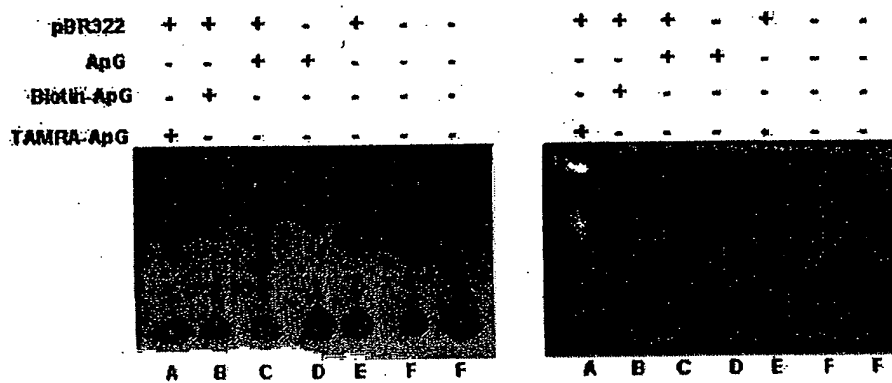


FIGURE 27

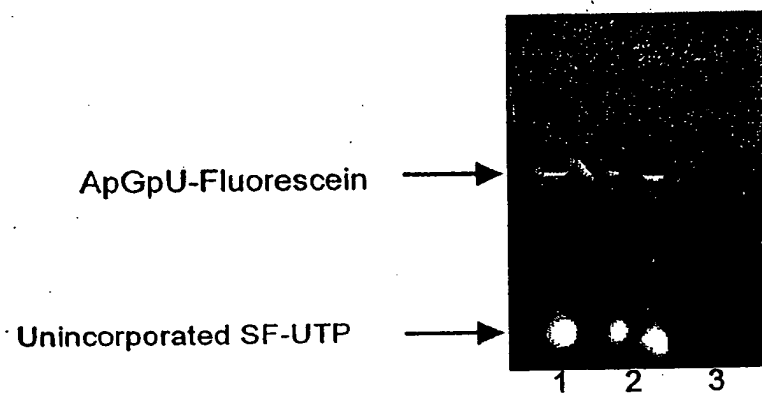


FIGURE 28

Assay Optimization - Kinetics of FRET

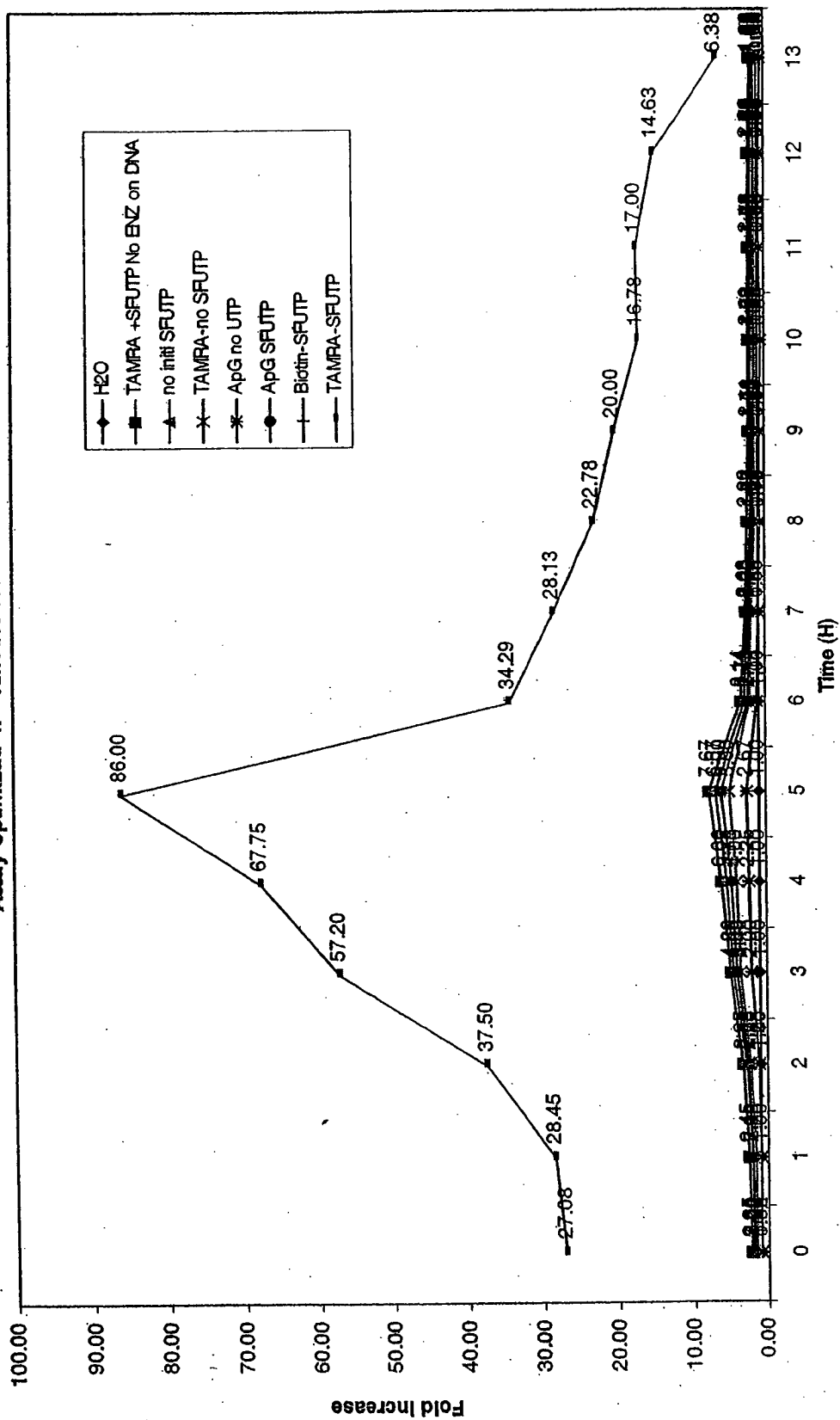


FIGURE 29A

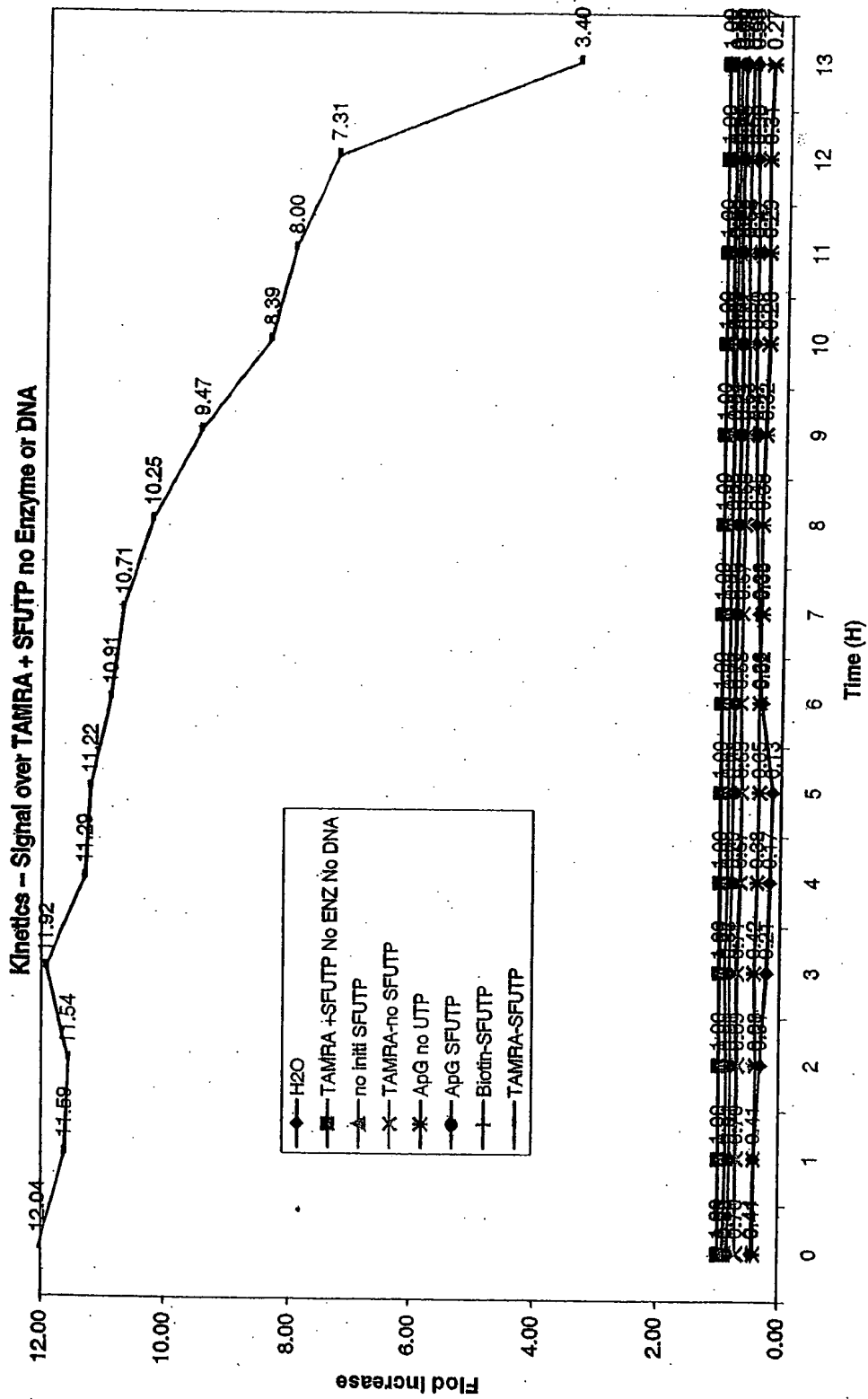


FIGURE 29B

Signal over Sf-UTP

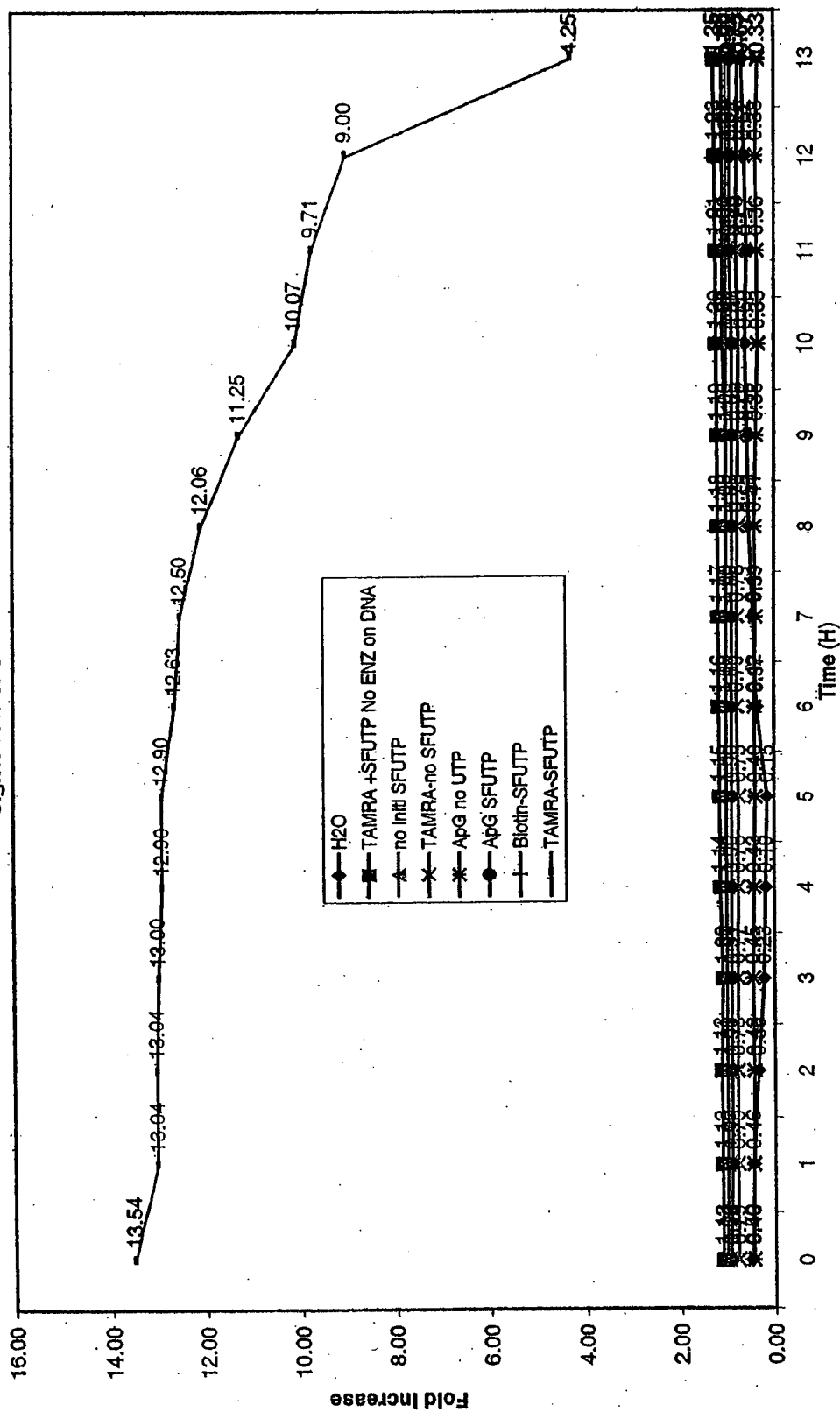


FIGURE 29C

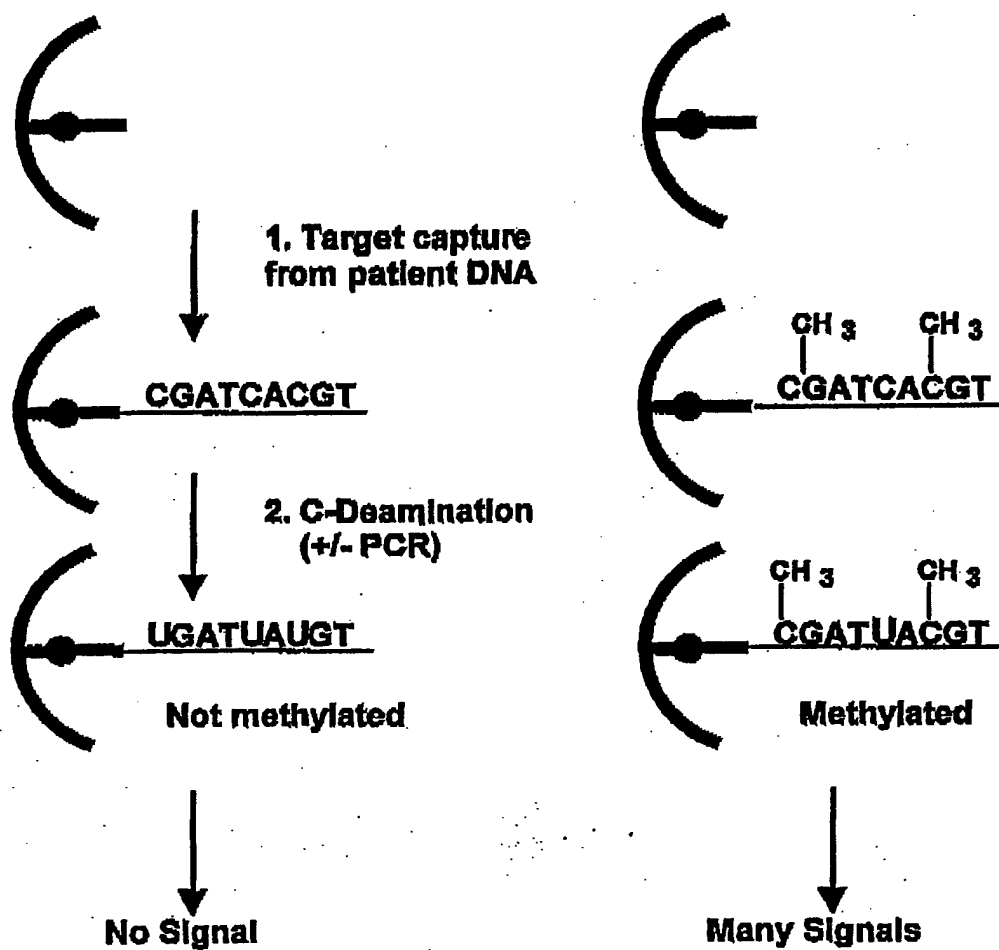


FIGURE 31